

Summit Scientific

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October 17, 2016

Colby Sterling
Talon/LPE
1811 E Mulberry
Ft Collins, CO 80524
RE: Razor 12F

Enclosed are the results of analyses for samples received by Summit Scientific on 10/14/16 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Talon/LPE
1811 E Mulberry
Ft Collins CO, 80524

Project: Razor 12F
Project Number: 70150.064.03
Project Manager: Colby Sterling

Reported:
10/17/16 16:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background@4'	1610112-01	Soil	10/14/16 13:30	10/14/16 17:00

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSM'.

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S2 Work Order: 1610112 **Sample Receipt Checklist**
Client: Talon Client Project ID: Razor 12F
Shipped Via: P.U. Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Matrix (check all that apply): Air X Soil/Solid Water Other: _____
(Describe)

Cooler ID					
Temp (°C)	<u>19.9</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?			<u>X</u>	
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	<u>X</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>X</u>			
If custody seals are present, are they intact ⁽¹⁾ ?			<u>X</u>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<u>X</u>			
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>X</u>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<u>X</u>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<u>X</u>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<u>X</u>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<u>X</u>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<u>X</u>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Muri P.
Custodian Printed Name

MS 10-14-16
Signature or Initials of Custodian

18:38
Date/Time



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Background@4'
1610112-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 10/14/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2980	13.1	mg/kg dry	1	1610164	10/17/16	10/17/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	571	6.57	"	"	"	"	"	"	
Sodium	1880	6.57	"	"	"	"	"	"	

Date Sampled: 10/14/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.27		units	"	1610176	10/17/16	10/17/16	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/14/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.630	0.0100	mmhos/cm	1	1610170	10/17/16	10/17/16	SM 2510B	

Date Sampled: 10/14/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.06	0.100	pH Units	"	1610168	10/17/16	10/17/16	EPA 9045	

Date Sampled: 10/14/16 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.1		%	"	1610173	10/17/16	10/17/16	% calculation	

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Project: Razor 12F
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10/17/16 16:10

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1610164 - General Preparation

Blank (1610164-BLK1)

Prepared & Analyzed: 10/17/16

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (1610164-BS1)

Prepared & Analyzed: 10/17/16

Calcium	548	10.0	mg/kg wet	500	110	82.9-118
Magnesium	581	5.00	"	500	116	77.1-123
Sodium	599	5.00	"	500	120	71-129

Duplicate (1610164-DUP1)

Source: 1610107-01

Prepared & Analyzed: 10/17/16

Calcium	1820	13.2	mg/kg dry	1520	18.1	200
Magnesium	340	6.61	"	321	5.62	200
Sodium	1260	6.61	"	1230	2.29	200

Matrix Spike (1610164-MS1)

Source: 1610107-01

Prepared & Analyzed: 10/17/16

Calcium	2160	13.2	mg/kg dry	661	1520	97.1	75-125
Magnesium	1140	6.61	"	661	321	124	75-125
Sodium	2020	6.61	"	661	1230	120	75-125

Matrix Spike Dup (1610164-MSD1)

Source: 1610107-01

Prepared & Analyzed: 10/17/16

Calcium	2160	13.2	mg/kg dry	661	1520	97.2	75-125	0.0269	25
Magnesium	1070	6.61	"	661	321	113	75-125	6.46	25
Sodium	2050	6.61	"	661	1230	125	75-125	1.43	25

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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1610168 - General Preparation

LCS (1610168-BS1)					Prepared & Analyzed: 10/17/16						
pH	8.01	0.100	pH Units	8.00	100	95-105					
Duplicate (1610168-DUP1)					Source: 1610107-01 Prepared & Analyzed: 10/17/16						
pH	8.85	0.100	pH Units	8.80		0.567	20				

Batch 1610170 - General Preparation

Blank (1610170-BLK2)					Prepared & Analyzed: 10/17/16						
Specific Conductance (EC)	ND	0.0100	mmhos/cm								
LCS (1610170-BS1)					Prepared & Analyzed: 10/17/16						
Specific Conductance (EC)	0.504	0.0100	mmhos/cm	0.500	101	90-110					
Duplicate (1610170-DUP1)					Source: 1610107-01 Prepared & Analyzed: 10/17/16						
Specific Conductance (EC)	0.833	0.0100	mmhos/cm	0.831		0.301	20				

Batch 1610173 - General Preparation

Duplicate (1610173-DUP1)					Source: 1610107-01 Prepared & Analyzed: 10/17/16						
% Solids	75.7		%	75.7		0.00	20				
Duplicate (1610173-DUP2)					Source: 1610107-02 Prepared & Analyzed: 10/17/16						
% Solids	75.7		%	78.3		3.38	20				

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Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

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